

base. As discussed above, the locking positions are defined by grooves formed in the interior surface of the sleeve **86** and a detent formed on the exterior of the cylinder of the hinge **74**. The engagement between the detent and groove of the hinge **74** is sufficient to securely retain the display member **14** in the closed position with the arm members substantially parallel to the base. As the arm assembly **16** approaches the zero or closed position, with the detent approaching the edge of the groove, the detent has a tendency to move into the groove such that the display member **14** is snapped toward the base **12**, facilitating closure of the computer **10**. Thus, in the illustrated embodiment of this invention a separate locking mechanism is not provided. However, it is to be understood that a mechanism securing the display member **14** in the closed position may be employed if desired.

In the preferred form of the invention, one of the arm portions is provided with both hinges **72**, **74**. In the illustrated embodiment, the left arm portion **52** is provided with the hinges. However, it is to be understood that the hinges may be moved to the right arm portion **54** if desired. With the hinges located in arm portion **52**, the other arm **54** is provided with an internal conduit **92** which houses the electrical connectors **94** coupling the screen **34** to the components housed in the base **12** as shown in FIG. 2. In the illustrated embodiment, the electrical connectors **94** are carried by a ribbon as is known in the art. The ribbon **94** is threaded through a path which minimizes the stresses exerted on the ribbon during rotation of the arm assembly **16** relative to the base **12**, and rotation of the display member **14** relative to the arm member. As the ribbon **74** enters the arm portion **54** from the display member **14**, a complete loop (not shown) is formed in the ribbon. The loop selectively becomes tighter and looser as the display **14** is pivoted relative to the arm portion **54**, preventing the electrical connectors **94** from crimping. Similarly, instead of feeding the ribbon in a direct path from the arm portion **54** to the base **12**, a second loop (not shown) is provided before the ribbon enters the base **12**. This loop also reduces stresses on the ribbon during manipulation of the arm assembly **16**.

The computer **10** includes a battery (not shown) for supplying power for the computer **10**. As is known in the art, the computer **10** preferably also includes AC adaptor port for supplying power without using the battery. The battery is preferably a lithium ion rechargeable battery, although the use of other types of batteries is within the scope of this invention. The battery is positioned in the rounded portion **64** of the base **12** such that the pivot axis extends through the battery. With this configuration, the overall size of the computer may be reduced. The battery is removable through the door **21**. The battery is held within the battery compartment of the base by prongs (not shown) extending from the opposite ends of the battery. When in position, electrical contact is made between contacts on the battery and connectors which are coupled to the printed circuit board within the base **12** (not shown). Power conservation features to maximize battery life are advantageously implemented such as those disclosed in U.S. Pat. No. 5,396,635 and co-pending patent application Ser. Nos. 08/767,821; 08/459,341; 08/460,078; and 08/458,189; which are incorporated by reference herein.

The computer **10** of the illustrated embodiment is automatically turned on for operation when the display **14** is lifted from the closed position overlying the base **12**. This effect is achieved by a number of sensors which cooperate to identify the position of the display relative to the base. A first sensor **102** is provided on the upper surface of the base

12 to signal when the display member is in a position overlying the base. The display may be in one of two orientations when overlying the base. The base includes a second sensor **104** to determine when the display is in the closed position, with the screen **34** facing the base **12**. In the illustrated embodiment, the sensor is positioned in the recess **40** where it detects the presence of the clip retainer, indicating that the display is in the closed position and the screen is facing downwardly. When these conditions occur, the computer **10** is turned off. When the sensors **102** and **104** detect that the display has been moved from the closed position, the computer is automatically activated to the "on" condition. In this context, ON may mean that power is ON and that the CPU is operating in an active state, while OFF may mean that the computer is in some reduced power state such as in hibernation mode, sleep mode or the like power conservation mode. OFF may also mean that the computer is completely turned off. An advantage of eliminating disc drive in some embodiments is the virtually instant start up associated with loading operating system and applications from ROM. The memory door **19** and the battery door **21** also include sensors (not shown) which senses whether or not these doors are open so that a predetermined operating mode may be invoked or retained depending on the sensor condition. For example, if the memory door or battery door are open, the computer will remain OFF or in some hibernation or sleep mode. Sensors may also be provided to inform the computer of the orientation of the display so that the display screen and operating condition may be controlled accordingly. Sensors may be contact type or contact less, including such known devices as microswitches, magnetic switches, LED/photodiode sensor pairs, and the like. Logic circuits query the conditions of the switches and provide inputs to the CPU or other logic means to control or modify operation.

To allow the user to manually turn off the computer **10**, the computer includes an on-off switch **106** located on the front surface **31** of the display **14**. An indicator light **108** provides a visible signal indicating the on/off (operating/non-operating) condition of the computer **10**. An alarm light **110** is also provided to alert the user to various conditions. For example, the computer **10** may include scheduling software with the indicator alerting the user of a scheduled appointment or meeting. Although not included in the illustrated embodiment, the computer **10** may include a pager, with the alarm light being activated to notify the user of an incoming message. If a wireless modem is provided, the alarm light may also be used to notify the user of an incoming electronic message.

The foregoing descriptions of specific embodiments of the present invention have been presented for purposes of illustration and description. They are not intended to be exhaustive or to limit the invention to the precise forms disclosed, and obviously many modifications and variations are possible in light of the above teaching. The embodiments were chosen and described in order to best explain the principles of the invention and its practical application, to thereby enable others skilled in the art to best utilize the invention and various embodiments with various modifications as are suited to the particular use contemplated. It is intended that the scope of the invention be defined by the claims appended hereto and their equivalents.

What is claimed is:

1. A portable computer comprising:

a base having an upper surface, a bottom surface, and spaced first and second side edges, a rear end portion, and a front end portion having a front peripheral base edge;